

1. (Previously presented) An electronic device comprising a semiconductor substrate having a first side and a second side; a vertical trench capacitor on the first side of the substrate, the vertical trench capacitor including a plurality of trenches in which dielectric material is present between first and second conductive surfaces; and a vertical interconnect that extends through the substrate from the first side to the second side, the vertical interconnect being insulated from the substrate by dielectric material, the dielectric material of the vertical interconnect and the dielectric material of the vertical trench capacitor being common material formed from a single deposition layer.

2. (Original) An electronic device as claimed in Claim 1, wherein the vertical interconnect has a first part and a second part, which first part is exposed on the first side of the substrate, is narrower than the second part and has a substantially cylindrical shape.

3. (Previously presented) An electronic device as claimed in Claim 1, characterized in that the vertical interconnect includes a plurality of parallel trenches each of which is substantially filled with electrically conductive material.

4. (Previously presented) An electronic device as claimed in Claim 2, characterized in that the first part of the vertical interconnect comprises a plurality of parallel through-holes that extend from the first side of the substrate to the second part of the vertical interconnect, each of the plurality of parallel through-holes being substantially filled with electrically conductive material.

5. (Original) An electronic device as claimed in Claim 1, characterized in that:

- contact pads for coupling to an external carrier are present on the second side;
- a first vertical interconnect is used for grounding and
- a second interconnect is used for signal transmission.

6. (Previously presented) An electronic device as claimed in Claim 5, characterized in that the first and second vertical interconnect are designed so as to form a coaxial structure.

7. (Original) An electronic device as claimed in Claim 1, characterized in that an integrated circuit is defined on the second side of the substrate.
8. (Original) An electronic device as claimed in Claim 1, characterized in that the substrate comprises a high-ohmic zone which is present adjacent to the vertical capacitors and acts as a protection against parasitic currents.
9. (Previously presented) An electronic device as claimed in Claim 8, further comprising a planar capacitor on the first side of the substrate, the planar capacitor including dielectric material formed from common material of the single deposition layer, and wherein the high-ohmic zone separates the planar capacitor from the vertical trench capacitor.
10. (Previously presented) An assembly comprising the electronic device of claim 1, and a semiconductor device, which semiconductor device is electrically connected to bond pads present on the first side of the substrate.
- 11-19. (Cancelled)
20. (Previously presented) An electronic device as claimed in claim 1, wherein the dielectric material of the vertical trench capacitor and the dielectric material of the vertical interconnect are formed by depositing a layer of dielectric material on the substrate and partially etching the deposited layer of dielectric material.
21. (Previously presented) An electronic device as claimed in claim 1, wherein the dielectric material of the vertical trench capacitor and the dielectric material of the vertical interconnect are identical dielectric material formed from the single deposition layer.

22. (Previously presented) An electronic device as claimed in claim 1, wherein the vertical interconnect is substantially filled with conductive material, the conductive material of the vertical interconnect and the second conductive surface of the vertical trench capacitor being formed from common material of a single deposition layer of conductive material.

23. (Previously presented) An electronic device comprising:

- a semiconductor substrate having a first side and a second side;
- a plurality of trenches on the first side of the substrate, each of the trenches extending into the substrate from the first side;
- conductive material lining each of the trenches;
- a vertical interconnect that extends through the substrate from the first side to the second side, the vertical interconnect having walls;
- a single deposition layer of dielectric material on the first and second sides of the substrate, on the conductive material lining each of the trenches, and on the walls of the vertical interconnect.

24. (Previously presented) The electronic device of claim 23, wherein the vertical interconnect has a first part and a second part, the first part extending from the first side of the substrate to the second part, the second part extending from the second side of the substrate to the first part and being wider than the first part.

25. (Previously presented) The electronic device of claim 23, wherein the vertical interconnect includes a plurality of parallel trenches.

26. (Previously presented) The electronic device of claim 24, wherein the first part of the vertical interconnect includes a plurality of parallel trenches each of which extends from the first side of the substrate to the second part of the vertical interconnect.

27. (Previously presented) The electronic device of claim 23, wherein the plurality of trenches form a vertical trench capacitor.